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# THE AMERICAN BEE JOURNAL

ESTABLISHED  
IN 1861

DEVOTED TO SCIENTIFIC BEE-CULTURE AND HONEY PRODUCTION.

ESTABLISHED IN  
1861.

Chicago, Ill., February 13, 1884.

VOL. XX. No. 7.

## THE WEEKLY EDITION OF

THE AMERICAN  
BEE JOURNAL

PUBLISHED BY

**THOMAS G. NEWMAN,**  
EDITOR AND PROPRIETOR.

925 WEST MADISON ST., CHICAGO, ILL.  
Weekly, \$2 a year; Monthly, \$1.

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**THOMAS G. NEWMAN,**

925 West Madison Street., Chicago, Ill.

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**THOMAS G. NEWMAN.**

925 West Madison St. CHICAGO, ILL.



# Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX.

CHICAGO, ILL., FEBRUARY 13, 1884.

No. 7.

## THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,  
EDITOR AND PROPRIETOR.

☞ We can supply all new subscribers and renewals with the numbers from the beginning of the year, and shall do so unless otherwise ordered—presuming that it is so desired.

☞ “How to Become a Good Mechanic,” is the title of a pamphlet of 46 pages, by an “Old Apprentice,” and published by the Industrial Publication Company of New York, at 15 cents. It is intended as a practical guide to self-taught men; telling what to study, what books to use, how to begin, what difficulties will be met, how to overcome them. In a word, how to carry on such a course of self-instruction as will enable the young mechanic to rise from the bench to something higher.

☞ “Dzierzon’s Rational Bee-Keeping,” bound in cloth, are now all gone. We have a large lot bound in paper covers, which we are sending to any one clubbed with the Weekly BEE JOURNAL for a year, for \$2.75. Any one who has paid for the BEE JOURNAL for 1884, may send 75 cents more for the book, and we will send it by return mail, postage paid. It is an imported book, printed in the English language, and the price of the book is \$1.50.

☞ Several complaints have been received about the American subscribers not getting the *British Bee Journal* for January. Evidently there has been some accident—perhaps to the steamship bringing them across the Atlantic—for our number for Jan. 1 only came to hand on Feb. 8, after the one for Jan. 15 was received. This may explain matters some.

### Another Severe Attack.

The many friends of the Rev. L. L. Langstroth will be pained to learn that he is again suffering from a return of his old malady, and unable to do any mental work. The following from his daughter, dated Feb. 6, 1884, is just received:

As my father is suffering from a return of his old malady, and is unable to attend to his correspondence, I write to let you know *why* you do not hear from him. The present attack seems to be unusually severe, but I trust it may be of short duration.

Yours respectfully,

ANNA L. COWAN.

Oxford, O., Feb. 6, 1884.

### Glucose.

Mr. Pringle, of Selby, Ont., writes as follows:

The following appeared editorially on Jan. 22, in the *Toronto World*. I send it to you for the columns of the BEE JOURNAL, and will be pleased to see it followed by your own comments:

“The National Academy of Scientists at Washington made a report on glucose to the commissioner of internal revenue. It shows the manner of manufacture of grape sugar and glucose, and finds that the artificial is in no way inferior to cane sugar in healthfulness, and that maize starch-sugar, either in its normal condition or fermented, has no deleterious effect upon the system even when taken in large quantities. The illustrious scientists aforesaid might have sooner reached this conclusion, which is a perfectly sound one, had they reflected that honey is sugar in the state of glucose. Honey has been considered a healthy and desirable article of food since the days of Moses, and earlier. Further, the doctors say that every grain of crystalized sugar taken into the human stomach becomes glucose in the process of digestion. If glucose or grape sugar were simply kept by itself and sold on its own merits, it might soon come into very general use.”

We have already commented on this matter, on pages 19, 52 and 68. The whole thing was intended to give a “boost” to the manufactures of the fraudulent stuff; but the gauze was too thin.

### Time to Think and Review.

The Indiana *Farmer* gives the following “good and timely” advice:

As the spring advances it will be well to review the past season’s work, and see wherein we have failed; to try and avoid like mistakes in the future. The winter and early spring is a good time to read upon the subject in hand, then there will be less danger of failures in the time to come. Hives and fixtures necessary for the season’s work should all be secured in time. Do not wait until you are in urgent need of all these things before ordering, but order early and thus avoid not only the loss of time, but bees and honey, for time with us is money, for which we work. The writer knows from experience of what he writes.

On the amount of surplus secured depends the profit of the apiary, and for this end, it should be our aim. The honey crop should consist of both comb and extracted honey. For the former, large sections are best for home consumption or for a home market, but for the general market the one-pound sections are the favorite. But let the object sought be what it may, the first and most important part of it all is to be ready in time, for in this may depend the entire success of a season’s work.

☞ The following named catalogues for 1884 are received:

Smith & Smith, Kenton, O.—Supplies W. S. Cauthen, Pleasant Hill, S. C.—Bees and Queens—4 pages.

D. B. Brown, Des Moines, Iowa—Italian Bees—6 pages.

Apiarian Supply Co., Wilton Junction, Iowa—Bees and Apiarian Supplies—32 pages.

Miller Bros., Nappanee, Ind.—Hives and Supplies—8 pages.

J. W. Eckman, Richmond, Texas—Bees—1 page.

Smith & Morgan, Columbus, Wis.—Apiarian Supplies, Bees and Queens.

Hiram Sibley & Co.’s Seed Catalogue, Rochester, N. Y.—130 pages.

Cox’s Seed Annual, San Francisco, Cal.—64 pages.

☞ We have so many articles for the BEE JOURNAL in waiting, that we give the preference, this week, to short articles and letters, so as to accommodate as many as possible. The others will appear as soon as we can get to them. Our correspondents will please have a little patience and “all will be well.”

## CORRESPONDENCE

For the American Bee Journal.

### Statistics and Essays.

O. O. POPPLETON—155.

I would like to say something on these two subjects, which have been suggested by articles in the BEE JOURNAL of Jan. 30.

There is no need of my repeating any of the reasons given by Dr. Miller (page 70) why and when we want statistics of our honey crop, as he has stated them fully and correctly. What is wanted is to find the "How" to obtain them in shape and time to be of value.

Those obtained by assessors or other state officers, are undoubtedly more complete than can be obtained by any other means, but cannot possibly be obtained in time to be of value. We are, therefore, thrown on our own resources.

While we cannot get full and accurate statistics, I am satisfied from experience in trying to get them from my own State the past two seasons, that we can get them full enough to be of very great value in marketing our honey. What we want to know is, about what is the extent of the crop in different parts of the country, as regards an average crop, so we can judge about what and where the best market will be.

I have thought much on this matter, and now give suggestions of what seems to be the best plan I can think of. Let the executive committee of our North American Society decide what information is wanted, prepare a list of questions (as far as possible), then publish in each of the bee papers, at least one or two months previous to the meeting of the society, a request to all bee-keepers to send to the vice-presidents of their respective States, answers to these questions on a card, appending to this request a list of the vice-presidents and their addresses. These reports can be tabulated by the vice-presidents, and forwarded to the secretary, in time for him to prepare a tabulated report to the society. This will also have the advantage of saving some two or three hours of valuable time of the convention, now taken up in listening to individual reports from the States. This plan was tried last year, but entirely failed, because it was only published in one paper, and even that one omitted the addresses of the vice-presidents. These addresses are very important, as I doubt whether one bee-keeper in a hundred in Iowa knows where to address a card to me, if they were simply told that I was the proper person to send their reports to, and the same would be true in some of the other States.

We will probably have very little trouble so far as Iowa is concerned, as our State society is to meet at the time of the State Fair, about the close

of the honey season, and, of course, statistics can be obtained then.

### ESSAYS AT CONVENTIONS.

I have attended several important conventions, the proceedings of some of them consisting almost exclusively of essay reading, while others went to the other extreme, and my opinions are exactly the same as those given by Mr. Hutchinson on page 73, but he gives no suggestions or plan how those opinions can be practically carried out, which is a very important part of the subject.

I have devoted some thought to this subject, and the best plan I can think of would be the appointment of a committee to examine all essays that may be handed in—they to select such of them for use by the convention as are on topics of general interest, and so written as to be an excellent basis for the discussion of the topics they treat of. There are one or two serious objections to this plan, but it is the only one I can think of that will prevent the reading of long prosy essays on topics not of general interest, nor valuable as a basis for discussion.

Anything that helps to make our conventions more valuable, is well worthy the careful consideration of all persons who may be charged with their conduct.

Williamstown, Iowa, Feb. 1, 1884.

[Would it not be better to select a few topics, and appoint some person to prepare a short speech or essay to introduce each subject, making suggestions, etc.?—ED.]

For the American Bee Journal.

### Ohio State Convention.

The Ohio State Bee-Keepers' Convention was held in Columbus, O., Jan. 14-16. First subject: "How to create a home market for honey." Dr. Besse said that by care and careful management there is no trouble in creating a home market. When he first began, could only sell from one to two pounds where he now sells from five to ten pounds. By making a good showing at County Fairs it helps greatly to create a home market.

Mr. Benedict thinks we should impress on the minds of the people that honey is healthy as well as a luxury, and that it should be kept in every house as a medicine for coughs, colds, and, in fact, for all lung diseases.

Mr. Goodrich, of Columbus, had no trouble in selling 2,800 lbs. of extracted honey at from 18 to 20 cents per pound. He put it up in five and ten pound buckets; thinks he can sell more by using the ten pound buckets.

Mr. Cochran advises using two-pound sections for comb honey in the home market; he thinks it is just as easy to sell two pounds as one; the first thing to do is to get the confidence of the people, so that they know that they are getting pure honey. Others engaged in the discussion, but generally agreed with the above.

"What shall we do to prevent adulteration of honey?" It was generally considered that we could do nothing more than when we knew of any person so engaged, that we publish them, and if they are members of this association, that they be expelled therefrom.

"Will bees feed on glucose?" It was said by those that had tested it, that they would not, if they could get anything else to work on.

"How many colonies can be kept in one locality at a profit?" It was generally decided that by sowing pasturage on the highways, creeks, and waste ground in a neighborhood, that there could not be bees enough put in any one locality to overstock it.

Mrs. Cochran asked if it was not the duty of bee-keepers to cultivate some honey-producing plants in order to keep the bees from destroying their neighbors' grapes?

A. I. Root, of Medina, spoke of the main honey plants, also mentioned the great western fireweed in this connection. Catnip, sweet clover, borage, etc., was also added to the list.

"How to prevent second swarms?" The method thought to be the best was to look through the hive, after the first swarm had come off, cut out all queen-cells and introduce a laying queen.

A committee was appointed to wait upon the members of the Legislature to see if we could not get an appropriation to be used in securing the statistics, and to investigate the causes of diseases among bees, etc. S. D. Riegel, Dan'l Spear, Burgis Helphry, Dr. H. Besse, C. M. Kingsbury, and J. T. Martin were appointed as the committee.

A committee was appointed to confer with the Ohio State Board of Agriculture in reference to an enlarged premium list for the State Fair.

A motion was then made to change the time of holding the annual convention from fall to winter, which was adopted unanimously.

"Which are the best size of sections?" I will not occupy space to give the discussions, but will give the votes as they were taken on the different sizes. The natural law of convenience will solve this problem better than we can do at conventions.

Mrs. Cochran said that ladies preferred the one-pound sections, as they are the most convenient for table use.

One member favored half-pound; 28 favored the one-pound; 3 favored the 1½ pounds; and quite a number did not vote.

The vote in favor of the width of sections was: 17 favored 1½ inches in width; 3 favored 1¾; 1 favored 1½, and one the 2-inch sections, and great many did not vote, as they had no preference. It was the unanimous expression of the convention to do without separators.

The subject of the size of frames for brood-chambers was next discussed. The majority favored the Langstroth; however, some favored the 10½x10½; others 12x12; and some 11x11, and all gave reasons why we should adopt their favorite sizes.

Mr. Fredenburgh says it is impor-



tant that we should look through a colony after a swarm has come out, as they will sometimes swarm when there is nothing in the hive but an egg from which to rear a queen, causing the bees to be idle from 14 to 16 days; by giving them a laying queen they will at once go to work.

Mr. Benedict: There never was a young queen hatched in an Italian colony before the old one had left.

Mr. Spear: You cannot adopt any rule on which we can always rely.

Mr. Eaton: The best way to get good queens is to give the larva plenty of food. The young bees always rear the queens, as the old ones will not care for them.

"Introducing queens in new colonies," was next discussed. Various plans was given, of which I will mention a few, that was thought to be the best.

Mr. Benedict said his plan is to con- quor his bees; first he gives them a little smoke, and after the old queen is removed, he shakes the bees down in front of the hive and drops the new queen among them; he repeats this two or three times and lets them go. Another is to use a small wire cage, with corks fitting in either end loose, attached to strings, the ends of which come outside of the frames; after the bees have become quiet, draw the corks out of the cage and let the queen out; it should be done quietly. The Doolittle cage is thought to be as good as any.

Mr. Root said that foundation is now made that will take from 15 to 20 feet to a pound, and that it has been greatly improved within the last year.

J. T. Martin, of Tiffin, then delivered a lecture on "Encouraging bee-keeping among the people."

The following lectures were delivered during the convention: Mr. Benedict read an excellent paper on "The management of bees for profit;" Dr. Besse on the subject of "Spring Management;" Prof. Lazenby, of the Ohio State University, on "The nature, quality and usefulness of nectar, for the purpose of plant fertilization;" Mrs. Jennie Culp reported her management of bees during the production of over two tons of honey.

"How to keep grass and weeds down around the hives?" Sprinkle salt around them; others advised the keeping of sheep or rabbits in the Apiary.

"Which is the best and quickest way to get and keep shade over the hives?"

The President and Mr. Root preferred grape vines.

"Are the new races of bees a success?" They were not thought very favorably of by the majority of those who had kept them, on account of their being so irritable, and on account of their being too prolific in time of drouth. When bees are the main object they are very profitable, as they have been known to increase 20 colonies in a single year.

"Where a perforated honey board is used will it prevent the queen from going up into the surplus chamber?" It was generally conceded to be of no use.

A committee was appointed to examine the honey and bee supplies, and in their report Mr. Root says that he has discovered that honey may be kept two years in as good condition as as that of new honey; the honey was that of Mrs. Culp.

Mr. Riegel explained a surplus honey box for containing sections of different sizes, which was considered to be quite an advantage to those that work for comb honey.

A general discussion ensued on how to winter bees successfully. Several ways were given, of which I will give two or three that was considered to be the best. One is to build a house with double walls about six inches apart, and fill between the walls with sawdust; also on the floor and ceiling about the same thickness, and at one end make an air tube from 10 to 12 inches square, allowing it to extend through the floor and within 3 feet of the ceiling; and at the other end of the building have a similar tube extending from within 3 feet of the floor, up through the roof; have a valve in the first tube, so that it can be opened and shut as the weather may change. In many instances where the cellar is well ventilated and dry, they may be wintered very successfully; the majority favored wintering on the summer stands. Care should be taken not to try to be too kind to the bees, as the entrance should be left wide open and some porous material put on top of them, and let them remain quiet all winter. The bees want more ventilation in the winter than in the summer.

Mr. Martin thinks the cause of bees dying when they have plenty of stores, is that they exhaust themselves in breathing so fast to inhale oxygen to keep up heat.

Dr. Besse's theory is that they starve to death with stores close to them, which they are unable to reach.

The committee to confer with the members of the Legislature report that they met the chairmen of the committee on agriculture in both branches of the Legislature, and they thought something ought to be done in that direction, and would give the bill a favorable consideration.

Prof. Riegel then gave a very instructive lecture on extracting honey.

Mr. Shively asked how to Italianize an apiary with one pure Italian queen. The Vice-President said the best way was to rear cells from the queen, and place them in nuclei or full hives. These young queens may, however, meet with impure drones; which must be prevented, if possible, by not allowing any black drones to be reared in the vicinity of the apiary.

Mr. Cole spoke of fertilizing queens late in the fall, when the bees had generally destroyed the drones; said he had reared queens, last fall, quite late, and feared the queens were not fertilized as they laid no eggs. The Vice-President thought that if the queens were of proper age, they would likely be fertilized, as drones would be found about the apiary.

Mr. Nutt, of Iowa, said that they have more bees die in April than any other month in the year.

Mr. Martin had an occasion to take a frame from a hive in the middle of winter, and on doing so he found web and moth worm in the middle of the frame; how did it get there, in a strong colony at that time of year?

A motion was made and carried to insert in our premium list a premium for extracting honey. By some it is thought better to go in winter quarters with old bees than young ones.

C. M. KINGSBURY, Sec.

For the American Bee Journal.

### Care of Bees on Sundays.

WM. H. BALCH.

All animate creation develop, mature and decay regardless of any day, it being only a matter of time. Trees bring forth fruit, fields yield their harvest, flowers secrete nectar to be taken up by insects, or "wasted on the desert air." But man, formed in the image of his Creator, a little lower than the angels, requires more; food, raiment, and many other things; with the rest, wild and domestic animals, all more or less, in different ways, contribute to his happiness and support. With the latter there is a certain amount of care and labor to be bestowed, in order that we may reap the full benefit for them to serve the end for which they were created. Who would think of leaving the faithful horse or the patient ox after their week's toil, from Saturday night until Monday morning without food or water? What would be the result if dairymen should not milk their cows or feed them on Sunday? It seems needless to multiply words on the subject, when we consider the small amount of necessary time required for the care of our bees on Sunday, when compared to that of other domestic animals.

Oran, N. Y.

[Discussions involving religious views, of which there are all kinds among bee-men, are out of order in the BEE JOURNAL. With this, therefore, let this subject rest, for, once begun, it would be an endless dispute, and no one would be benefitted.—Ed.]

For the American Bee Journal.

### New Facts from Old Theories.

B. F. CARROLL.

Proposition IX, Dzierzon theory: "All eggs germinated in the ovary of the queen develop as males, unless impregnated by the male sperm while passing the mouth of the seminal sac or spermatheca, when descending the oviduct. If they be thus impregnated in their downward passage (which impregnation the queen can effect or omit at pleasure,) they develop as females."

When this theory was first promulgated by the venerable German bee-master, it seemed so ridiculous that it could not be believed; but time has shown that this great master in api-

culture was getting at the facts as they really existed. There are a few bee-keepers who yet doubt the truth of a portion of the Dzierzon theory.

I would state the proposition thus: All eggs germinated in the ovary of the queen, are coated over with a thin mucous substance, which receives the impregnating male sperm while passing the mouth of the seminal sac or spermatheca when descending the oviduct, and said male sperm can be removed by the nurse bees after the eggs are deposited in the worker cells, and the sex of the egg changed.

Holy Moses! do you intend to throw aside all well-authenticated theories, promulgated by such great lights as Huber, Rev. Dzierzon, Profs. Von Siebold and Leuckart, Baron of Berlepsch, and a host of learned bee-masters of the old and new world? No, my friends, I do not doubt one syllable of what these learned, scientific bee-masters set forth, but only wish to carry their researches a little further, if you please, making new discoveries in fields so rich with the thoughts of so many learned men.

To say that bees can change the sex of eggs at pleasure, is saying a great deal, but I think I can truthfully assert such to be true, as much so as a drone is the "son of his mamma." Understand me; a drone egg, that is, an unfertilized egg, will produce a drone always, and cannot be changed by the nurse bees, it matters not how hard the little fellows may try their mathematical skill; but, on the other hand, it is a simple operation for them to remove the male sperm from the worker egg just after the egg is laid, or just before the egg hatches.

I claim, friend bee-keepers, that if the egg is impregnated as it passes the mouth of the seminal sac when descending the oviduct, as the Rev. Father Dzierzon asserts, the male sperm is compelled to lodge in the mucus covering of the egg, and can be removed by the bees when the welfare of the colony demands it; and this seldom happens, unless a queen is suddenly killed by some mishap, and no drones left for mating with the young queen. And further, I believe the entire outer coating or covering of the egg is taken up in the development of the young larvæ; or, in other words, is a part of the milky substance seen when the egg is changed to a minute grub or larvæ.

And now for the facts in the case: I suspected this was the case in 1879, but was not positive about it until this and last year. To test the matter thoroughly, last August I took two new worker brood combs, built out on Given foundation in wired frames, and inserted them in the center of my Syrian colony containing one of D. A. Jones' best queens, and placed a Mason  $\frac{1}{2}$  gallon fruit jar feeder, filled with syrup, immediately over these frames to get the bees to cluster on them. Four days after, I take them out, and find them about half filled with eggs equally, on each side, I cut a hole, about one inch in diameter, near the center of the eggs in one of the combs; in the other, near the center, I scrape the cells off to the foundation for a

space of 3 inches by one inch, and put both combs together in a strong queenless colony that had been especially prepared for this experiment, and had no laying queen for 2 weeks, having taken out a virgin queen 3 days before giving the frames with eggs; and, to be sure, I carefully examined the other frames and saw no signs of laying workers. I examined these combs every day until the brood was all capped. Around the hole 8 queen cells were drawn out, and all hatched nice queens, and near these cells a dozen or more cells were enlarged and drawn out for drones, from which I saw drones hatch, and this was the sole cause of the experiment. On comb number 2, was not a single drone cell; and on the comb containing the queen cells, the drone brood was on the same side of the comb on which were the queen cells, while the other side showed solid worker brood. I tried this experiment twice in 1882, and several times last year, and I invariably found some drone brood near queen cells.

These experiments were always in colonies where there were no drones or drone brood; and to further test the matter, I prepared a comb as above stated, and put it in a queenless colony containing drone brood and drones, without getting any drones on my prepared comb, although I got a nice lot of queen cells, which proved to my mind, that bees have the power to change the sex of eggs when the welfare of the colony demand it. It was hardly possible that the bees removed the eggs of the worker bee and deposited one in its place, for there was only 2 day's difference in the capping of the worker and drone brood.

This thing has been surmised by several of your correspondents, Mr. Editor, but I do not know how far they carried their experiments.

Now in conclusion, let me introduce three propositions, and I invite all bee-keepers to watch closely and see if I am not correct.

First proposition.—Bees change the sex of eggs (female to male only), whenever the economy of the colony require it.

2. Laying workers are found in nearly all colonies, hence a colony with a pure mated queen may contain hybrid drones.

3. Queenless colonies containing laying workers will gladly accept a fertile queen or queen cell, if properly introduced.

Dresden, Texas.

For the American Bee Journal.

### Successful Out-Door Wintering.

J. E. VAN ETTEN.

On page 56 Mr. O. O. Poppleton says: "Show me a practical method of keeping the entire inside of my hives perfectly free from dampness, and I have no further fears of unsuccessful wintering."

About 2 years ago I reached the same conclusion. I observed that wasps, hornets, flies and various-winged insects invariably sought a dry

place in which to pass the winter, paying little or no regard to its exposure to a very low temperature. I observed flies issuing in the spring from iron door-locks, in which they had successfully passed the severest of winters.

I have also seen many "bee-trees" cut, and I observed that the bees seldom built their brood nest at the very top of the hollow, but almost always left an open space or hollow at the side or very nearly above their brood nest.

These various hints set me to thinking, and I came to the conclusion that bees could stand almost any degree of cold, if free from dampness. I made many experiments, and the more I experimented the more I became confirmed in my notion.

At last I thought I had solved or very nearly solved the problem of successful out-door wintering. Accordingly, last fall I took off the surplus sections from my bees, took out the sections and replaced the empty section boxes turned upside down, to give a dead-air space above the bees, and covered with enameled cloth and a thin woolen mat. One colony I left exposed without any case or cap surrounding or covering the frames. Over each I placed a "shock" of corn stalks, which I tied at the top.

The winter so far has been remarkably cold, the thermometer in January reaching as low as 20° below zero in this locality for several days in succession, yet my bees are all right. On the second day of February, I examined them and found them in the very best condition, and the colony without a case or cap quite as good as the rest, if not better. The bees were all bright, dry and clean, and not over a handful of dead bees could be found in any hive.

I have no further fears of successful out-door wintering. Keep away chaff and everything that will draw or hold moisture. Cover with corn stalks, set on end, tied at the top, and I will guarantee success.

Kingston, N. Y.

For the American Bee Journal.

### The Winter Problem.

HENRY ALLEY.

I have read several of the articles on the above subject, that have appeared in the JOURNAL the past few months, and it strikes me that there is more or less theory in all of them. Much has been written about pollen being the cause of dysentery. Loss in wintering is not in my opinion caused by the bees eating pollen. It has not yet been made evident beyond a doubt that old bees eat it in the winter. The fact that bees will live without any pollen rather proves to me that they use but little, if any, unless breeding is going on in the hive. How is it that bees used to winter well on summer stands before patent hives and much other "scientific apparatus" were invented? Why, I know of a bee man here in Essex county (one of ye olden kind) who keeps 40 colonies, and he uses all



kinds and styles of hives extant, except the movable frame. His bees are wintered on summer stands, and no extra preparation for winter is made. I hardly think he goes near them from fall until spring. Certainly he never knew anything about bees dying from eating pollen during the winter. He seldom, if ever, loses any in wintering, and when he does it is because they starve or lose their queen—a thing he knows but little about. Well, when I want some good strong colonies of bees, in May or June, I generally go to this man and get them, and he always has first-class colonies too. I usually find his hives full of bees, and well-stocked with new honey.

Now, does any one suppose that these bees do not have plenty of pollen in their hives? Of course they have it in abundance, as every hive should if the bees are to do well the coming season. Hundreds of colonies do not get an "early start" in the spring for want of pollen, and to this fact should be attributed, to some extent, spring dwindling. I am no convert to the pollen theory. The cause of loss of bees in winter, in my opinion, is owing more to the late gathered honey than on account of pollen, or all other causes combined. If we are to succeed in all cases in wintering our bees, the fall honey must be removed, as is now being done by many bee-keepers, unless known to be of a fine quality, which is the case when the weather is warm and dry during the fall months. Apiaries that are worked for surplus honey, and more particularly for extracted, have all the best honey removed in caps, or by the extractor, and when fall comes the bees fill their combs with honey of an inferior quality. There is not generally time, or the right kind of weather to properly ripen it so late in the season. Hence, long before spring, the unripe honey will sour in the cells, run out and daub the combs and bees. Dysentery sets in, and before the weather is warm enough for the bees to fly, hundreds of colonies have perished. Bees will not do much work inside the hive unless the weather is sufficiently warm for them to fly; and for this reason the soiled combs are not cleaned, and death to all is the inevitable result.

When bees are managed on the plan which has proved so successful in the case of my friend above alluded to, there can always be found in the hive plenty of early gathered honey; hence, one of the reasons why this particular lot of bees winter as well as they do. And, again, perhaps flowers that yield honey in the fall unfit for bees to winter upon, cannot be found in that particular vicinity, and the bees are not compelled to subsist six months on a poor quality of honey.

Something new will soon be developed regarding the winter problem. I predict that in less than three years a plan will be devised for wintering bees on dry sugar candy. Of course there will have to be plenty of water at hand, as the bees would soon starve on the sugar alone.

The right kind of a feeder has been

devised, and some other things necessary to make this new idea a success have been experimented upon. When it has been demonstrated that bees will winter in a temperature of from 60° to 90° then the winter problem will have been solved. I have known for 25 years that bees can be wintered on sugar syrup without a particle of honey, but the plan I have suggested is to winter them on dry sugar, that is, candy made by boiling sugar in water until the moisture has all evaporated, when it can be run into cakes or frames to be placed in the hives. I am certain that bees can be wintered by this plan, and if I am alive another year will try the experiment. But I will not try it in a room where the temperature stands at 90°. I think 50° or 60° is as warm as will be necessary. The room should be just warm enough for the bees to work the sugar and water. If my time is not too much taken I may say more on this point by and by.

Wenham, Mass.

For the American Bee Journal.

### Controlling the Queens.

W. R. GRAHAM.

I send a slip from the *Texas Patron*, published at Crockett, Tex., by Rev. P. W. Archer, of the Methodist Church, whose son, the Pastor of the M. E. Church, of Greenville, Tex., gave this slip to Judge Andrews and vouched for the statement, he having seen the astonishing feat performed many times by his father.

The executive committee of the Texas Bee-Keepers' Association, fully recognizing the wonderful statement, and the right of Mr. Archer to the realization of its value to our brethren, the world over, hereby extends the most cordial invitation to him to attend our next convention, when, if by gentlemanly courtesy and a fair compensation, the proprietor of this great secret can be induced to give it to the public, we expect to secure it. Here is the article:

"Probably no insects have been more carefully, intelligently and satisfactorily studied than the honey bees. Associations have been formed to discuss them, and books without number written; and it would seem that there are but few facts regarding them which are not well understood; and well have they repaid the study and toil that have been given them. A man that permits himself to become interested in this department, soon finds himself quite infatuated with the study of these truly wonderful insects. There are yet, however, many facts regarding them that have not been discovered, and some that have not been given to the public. Among them is this: It is possible to go to any thriving colony of bees, and without touching the hive, or in any way disturbing the colony by force, or the injection of any foreign substance within a few minutes, to cause the mother or queen bee to come out upon the resting-board and suffer herself to be taken up and carried away. We

repeat, for emphasis and distinctness, that this writer can locate himself beside a colony of bees, and within five minutes cause the queen bee to come out and allow herself to be captured. Others may be able to perform a similar feat, but if so, we have never read or heard of it; and certainly it is not by the plan referred to. This was an accidental discovery of the writer, and by the simplest means imaginable."

For the American Bee Journal.

### Adulteration of Beeswax.

S. J. YOUNGMAN.

I see that the Michigan State Convention brought out considerable discussion on the beeswax question. I think it an important one, as wax is getting higher in price, and cannot always be readily found when wanted, causing serious loss and inconvenience to the bee-keeper at a critical time.

I think the idea of mixing paraffine or any other substance with wax for comb foundation should be discouraged, even if it should be successful. It would soon raise the hue and cry of adulterated honey; besides, it would be the means of causing serious trouble to the bee-keeper at the hands of careless and dishonest supply dealers. There is some wax that will not stand any adulteration, as it is already too soft, either of its own nature or from the effects of using paraffine or other foreign substance. As I had serious trouble the past season with foundation purchased of regular supply dealers, but I do not think for a moment that they were guilty, even if the wax was adulterated, as it would be as much as any man's reputation was worth to be proven guilty of such an imposition. The foundation in question was very nice to look at, made of the nicest light wax; not a speck visible to the eye, and ran about 6 feet to the pound. After leaving from  $\frac{1}{2}$  to  $\frac{3}{4}$  of an inch space between the bottom bar and foundation, it would stretch or sag, rendering it necessary for me to cut off from  $\frac{1}{2}$  to a full inch after the combs were filled with brood and honey, causing a vexation of spirit which I do not care to have repeated again, and which all bee-keepers should abstain from.

I think there will be great improvement in the production of wax in the near future, and there is certainly a great need and chance for it, as there are great quantities wasted by the bees for the want of an opportunity to store or build comb of it, especially where foundation is used. One has only to notice the wax scales at the entrance of a populous colony of bees. I have often picked them up with the point of a pin, and thus soon get a small chew of pure wax. The loss in this way, by the scales dropping off the bees during the honey season, must be enormous, and if saved there would not be such a dearth of wax as now exists. I also think that bees would often profitably build comb if allowed to do so, especially in the spring while stimulative breeding is progressing. The bees secrete wax

during a honey flow, whether they are building comb or not, and if they are not employed building comb, this wax is most certainly lost.

Although not having the experience that Mr. Doolittle has, my own agrees with his; it is an undecided question as to whether it pays at the high price of foundation, to use it exclusively. During the past season I had quite an experience in the matter of comb building—my supply of foundation running out—and as I could not get any for about two weeks, I was obliged to use frames with only very narrow strips of foundation, from  $\frac{1}{2}$  to 1 inch in width, both in building up nuclei, and in full colonies. I found that nuclei could be profitably employed, and built nice straight worker combs where they would have done nothing if left to themselves.

With the full colonies comb was built very fast, but was nearly all drone comb, which I think of no value to the bee-keeper only to melt into wax. The building of an excess of drone comb seems to be the only drawback of getting nice straight combs, and I think fully as cheap as by the use of full sheets of foundation. There seems to be a large quantity of bees in the hive at all hours; would they not be building comb if comb was needed? Bees also build great quantities of comb at night; large sheets being built in a single night by new colonies. I would also like to say, while on this subject, that I think it unwise for bee-keepers to demand so fine a quality of foundation, especially for brood frames, for the dark is as good, and will be received and be built out by the bees as soon as the bleached, and is undoubtedly tougher and less apt to be adulterated, and it will be often noticed that when the bees build natural comb, it will often be far from white in color.

Cato, Mich., Jan. 4, 1884.

For the American Bee Journal.

### A Queen Eleven Years Old.

S. H. HARRISON.

I am a reader of the BEE JOURNAL, and I must say that I have been many times repaid for time and money invested. I am an amateur in bee-culture, and have no lengthy theories to advance.

In the spring of 1882, I had one good colony of bees, which I had wintered in the cellar. In the fall I had 5 colonies. I put them in the cellar to winter; 1 colony proved to be without a queen, and perished soon after placing on the summer stand, leaving me 4 colonies, which were in good condition last spring. They have increased to 10, which are now in the cellar in apparently excellent condition. I got some surplus comb honey.

I purchased the first colony of J. T. Godding, now residing in Washington County, Kans., who started his apiary in Nebraska, where he purchased an imported Italian queen with both her wings clipped very short, and said to have been three

years old when he purchased her. He has now owned her eight years, and she fills her hive with young bees now just as well as she did eight years ago. He claims that there is no mistake as to her identity, for he knows her when he sees her just as certainly as he knows a horse or a cow which he has owned for that length of time. I saw him a short time ago, and he said: "The old queen went into winter quarters with as strong a colony as he had in his apiary." He claims that the queen I purchased is from the old queen; at least nine years old when she laid the egg from which my queen was reared. Is not this a little out of the regular order of theories?

Mankato, Kans.

[There surely is some mistake about it.—ED.]

For the American Bee Journal.

### The Use of Comb Foundation.

F. M. TAINTOR.

On page 612 of the BEE JOURNAL for 1883, Mr. James Heddon says "that bee-keepers are now the greatest consumers of this, one of their own production, beeswax. In getting their wax to the foundation mills and back home, does it pay them to have the grocer, peddler, commission merchant and general dealer in wax, each take a margin of it? Just think the matter over and form correct conclusions." I think Mr. Heddon just right in regard to the peddler, commission merchant, etc., each taking out a margin. I believe, and would advise every one who has 20 colonies or more, to own a foundation machine, for I think that foundation fresh from the mill is worth nearly double that which is 2 or 3 months old, besides having it when you want it. I believe that everybody can afford to use foundation, even at a dollar a pound, if it could not be obtained for less.

There are several good machines made, but I prefer the Vandervort, although I think the Given press has many good points. I was as much surprised as was Mr. Caldwell to know that Mr. Doolittle did not use foundation. I guess Mr. Doolittle will think that I am extravagant, when I say that as long as I can buy beeswax for a dollar a pound or less, I shall use foundation.

Elm Grove, Mass.

For the American Bee Journal.

### Rabbets for Hives, etc.

THOS. GORSUCH.

On page 28, Mr. Heddon gives J. W. R. a very good way to put in metal rabbets, or rather strips of tin. I have tried Mr. H.'s plan, and I will tell you in what way I have improved on it. In place of using a  $\frac{3}{4}$  strip of tin, I use a strip  $1\frac{1}{2}$  wide, and fold or turn down one edge  $\frac{3}{8}$  of an inch flat; then nail it on with the folded side next to the rabbit. The advantages are, it makes the tin stronger, and

leaves no cutting edge to cut one's fingers and the chaff division-boards where used (we use no other kind), and it is much easier to put on, as the folded edge serves for a rest until it is nailed.

Is this not something unusual? On July 2, colony No. 24 swarmed out, or rather sent out a swarm, but before the bees all clustered, they commenced to go back, and soon all were home. On July 9 I found a cluster under the hive (our hives are all placed on stakes) that appeared to be working; on close examination we found three combs the size of a man's hand, and the centre one filled with eggs. This must have been the old queen, as it was the first swarm. We tried to hive them, but the bees, when we applied the smoke, went into the hive and remained there. Every bee-keeper should get an apiary register and see how easily it is to keep run of the queens, etc.

Gorsuch, Pa., Jan. 29, 1884.

### To Bee-Keepers of Illinois and Iowa.

The regular annual meeting of the Eastern Iowa and Western Illinois Bee-Keepers' Association will be held at Moore's Hall, No. 110 East Third street, on Thursday, Friday and Saturday, Feb. 21, 22 and 23, 1884.

Mr. T. G. Newman, of Chicago, editor of the Weekly BEE JOURNAL, will be with us, and has been engaged to give two lectures on "Bee-Keeping" on the 22d and 23d.

It is hoped that the members of the Association, and others will bring or send honey, apiarian supplies, etc. Any shipment of these, sent to Mr. Israel Hall, Treasurer of the Bee-Keepers' Association, Davenport, will be taken from the express office, removed to the Hall and cared for.

Also be ready to report results of last season's work.

Invitation is hereby extended, not only to the members, but also to their friends.

We want you to just swarm.

J. V. McCAGG, Pres.

I. J. NAGLE, Sec.

Columbus Bean, of Cape Girardeau County, Mo., says about five years ago a swarm of bees took up their abode in a hollow tree that stood a short distance from his door. They have gathered honey from year to year since that time without molestation. The other day, when the snow on the ground afforded a good chance to cut the tree and save all the honey, Mr. Bean rallied a party and soon had the biggest lot of honey on hand that a bee-tree ever afforded. There was a deposit of honey for 14 feet up the hollow of the tree, the "take" amounted to about 175 pounds.—*Missouri Republican*.

For \$2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly BEE JOURNAL and the book for \$1.75.



## What and How.

ANSWERS BY

*James Heddon, Dowagiac, Mich.*

### Light and Heavy Foundation.

Will Mr. Heddon please answer the following questions?

1. In view of the advance in comb foundation, and scarcity of beeswax, would he have foundation, intended to be put on wired frames, heavier than 6 or 7 feet to the pound? I believe the greater weight of foundation made for brood frames was intended more to prevent sagging than to supply the necessary amount of wax to finish the cells.

2. I have, late last fall, used sheets of foundation made on the Given press, hand wired, and put in foundation running 7 feet to the pound, and believe that the bees have added no wax.

3. Would you advise the dead bees to be removed from the cellar floors, where large numbers of colonies are wintered in one cellar, say once or twice during the winter?

L. L. TRIEM.

La Porte City, Iowa.

1. We find by experiment that with Given foundation, the bees usually use to good advantage, all the wax that we give them in sheets, Langstroth size, that run about 5 sheets to the pound. The base is thin, and the side walls soft; and such a sheet will draw into comb whose cells will be brooding-depth, without any addition of wax from the bees, whatever.

2. I am not sure but what you are correct in this statement.

2. While it may not do any good, it certainly could do no harm to so remove the dead bees, provided you do it so quietly that they are not aware of your presence.

### Was it Caused by Pollen?

To-day the thermometer stood at 51° above zero, in the shade. I threw the hay off the bees to let them have a fly, as there are only little patches of snow on the ground. I found them all in good condition but one colony, this one the lid had been left off last fall, the cap filled with sawdust, and some hay thrown over it, so it was not noticed; but not enough to keep the rain out. This colony had the dysentery badly, while the remaining 64 colonies showed no signs of it. Was it the dampness that caused it, or the eating of pollen?

H. CLARK.

Palmyra, Iowa, Feb. 1, 1884.

I think it was caused by an excessive accumulation of fecal matter, such as pollen, either solid, or floating in the honey. I am not aware that any such substance exists in water or dampness. Mr. Reynolds, of Cassapo-

lis, Mich., carried about 25 colonies through the winter, 3 years ago, when others about him lost heavily. Nearly or quite all of his colonies showed some signs of disease and depletion, except two that got very wet because of a leaky roof. Have you already forgotten about Mr. Balch's splendid success in the damp, moldy cellar, the same winter of our great failure in our exceedingly dry one?

### Queries from a Beginner.

I am a beginner in the bee business, and would like some advice. On Oct. 2, a neighbor gave me two late swarms. I put them together in a Simplicity hive, and let them settle the queen business themselves. I suppose it was a case of the "survival of the fittest." They had no brood and no honey. I fed them nearly 25 pounds of granulated sugar syrup. They capped part of their stores. I put them in the chamber over the kitchen, where there is a coal fire night and day. I closed the hive with wire netting. I see, Mr. Heddon, you disapprove of this in cellars. Shall I open the hive? They are very uneasy in moderate weather, but are strong and healthy yet, for anything I can see. Shall I give them water? At what time shall I begin feeding to start brood rearing? Please answer in "What and How." I have some outdoors packed in dry forest leaves. They were humming a week ago. The weather is very cold.

MARTHA A. DOBBIN.

Lake, N. Y.

I am not sure that the restlessness of your colony, whether caused by high temperature or imprisonment, will injure it in the least, when their food is pure white sugar syrup. I look upon anything that excites the bees in winter, as having too deleterious effects. It will aggravate dysentery and increase consumption of food. I think there is no dysentery among your bees, as you have removed the cause, and the excitement cannot aggravate what does not exist. If I desired to stop the excitement, I would put them in a cool cellar.

### Moving Bees 40 Yards.

Will Mr. Heddon please answer the following question in the Weekly BEE JOURNAL?

At what time, and which would be the most successful way to move an apiary of 70 colonies about 40 yards, to keep bees from returning to the old stand and insure success?

G. W. SULLIVAN.

White Cloud, Kans.

I should prefer such time as when the bees had been confined for some time before the removal, and when they could fly immediately afterward. A good time to move them is in the

night. Clear away all land marks connected with the old yard; scatter a few heaps of some old straw or corn stalks about the yard; get up in the morning before the bees do; lean a short board about a foot wide against the hive, right in front of the entrance, so that the bees will have to fly out around it to get out. Just before they are ready to commence flying, smoke each colony, and drum on the hive a little. Also set the heaps of straw in the old yard on fire, just previous to smoking the bees, and have a grand smudge in the air during the next few hours. This plan will work, even if the bees flew the day previous to removal.

### The Granulating of Honey.

Please tell us through "What and How":

1. Can white clover and basswood honey be prevented from granulating by sealing it up when extracted, or must it be heated?

2. If so, to what degree?

3. Will heating change the flavor?

4. Can honey be properly ripened or evaporated by keeping it in the open air or sun, in unsealed cans?

5. How can I tell when it is properly evaporated?

6. Can you give me any test?

SUBSCRIBER.

1. Sealing up honey does not prevent its granulating. Heating it will bring it from the granulated to the liquid state, but a continued low degree of temperature will cause it to granulate again.

2. Honey should never be heated to a degree above the boiling point of water, and not held at that degree any longer than is necessary.

3. Heating honey will change the flavor, and color also, damaging both if heated to a high temperature.

4. Honey sometimes improves in consistency by standing in small open vessels in a warm airy place, but while the warmth favors evaporation, it also favors bacterious development, which gives the honey that disagreeable twang. There seems to be no receptacle for honey as good for the purposes you mention as the capped wax and cells, and no place better to keep them than in the hives. Honey is properly evaporated when it is thick, rich and smooth. How thick? Why, thick, heavy or dense enough to hold a rich, oily flavor. Instrumental tests are not necessary, nor as practical to the producer as a little experience-knowledge. We used tact instead of talent in this case, because it can be so much more readily wielded.

**Sections, Cases, Dysentery, etc.**

Bees have been flying to-day for the first time since last fall. I have one colony of bees packed in chaff on the summer stands, to see if they can stand 38° below zero. So far they are all right. I see some signs of dysentery in the cellar in four hives. My cellar is too warm, 43°. It should be 38° to keep the bees in the cluster. My bees were put into the cellar Oct. 26; sixty-three colonies of bees nearly all strong. They will not get a fly until the last of March, if I can manage to keep them in without loosing too many.

1. Will fresh air make bees uneasy, while in the cellar?

2. Is there two kinds of dysentery?

3. If I fill your section case with sections full of foundation, and put them on the hive, will the bees enter them at once, or do they want some comb?

4. How many of the 28 sections in your case is not capped over, on an average?

5. Will foul brood spread by the sale of queens and comb foundation?

6. If I fill wide frames with sections and put them in the upper story and raise a comb of brood from below at the beginning of the honey harvest, will the bees go to work in the sections and cap them in good shape for market?

7. Have you or any one else weighed bees that were filled with honey to see which kind of bees brought the largest load of honey? FAYETTE LEE.

Cokato, Minn., Feb. 1, 1884.

1. I have known a sudden influx of fresh air to arouse bees, and perhaps sometimes to their detriment. Pure fresh air is an essential to human health, but how much so to the health of bees, is yet an unsettled question.

2. I think not.

3. My experience is that the bees will enter them and draw the foundation (if it is a good article), as soon as there is any flow of honey to store.

4. During the honey flow we usually leave our cases on until all is finished, without experiencing any loss or coloring of the honey by so doing. In some instances, however, we see the need of removing a case with 3 or 5 cases unfinished. After removing enough of such cases that the unfinished sections amount to 28, we put them all in a case together, and put them in a right place to be finished together. In removing all at the end of the season, of course we take them off in all stages of development.

Undoubtedly foul brood has been many times introduced with the introduction of queens from foul-broody apiaries. My opinion is, and it is well grounded and quite positive, that foul brood is not carried in the traffic in comb foundation; the degree of heat to which the wax is heated in making

foundation, is too high to leave a possibility of the spores surviving it.

6. My experience with this method of manipulation is, that brood and bee bread are more apt to get into the sections, with such a system. The cappings of the sections are more apt to be darkened by the bees, when they are filled and finished in close proximity to dark brood combs. I can see no need for such manipulation, and think where such is needed, the rest of the system is very faulty.

7. No, we have no adequate scales; besides there would be great variance with members of the same family. We have many times weighed the aggregate results of colonies of about equal numbers, and made our preference in races and strains in that manner.

## SELECTIONS FROM OUR LETTER BOX

**Bees in Fine Condition.**

I have 100 colonies in the cellar, and another lot packed in chaff; all seem to be in fine condition. A good many colonies, in this vicinity, not protected, have succumbed to the zero weather. L. HUBBARD.

Waldron, Mich., Jan. 30, 1884.

**Bees Carrying in Pollen.**

My bees commenced to carry in pollen on the 3d inst. from several sources; I think from red-bud, willow and arbor vitae. I have now 81 colonies all in good condition. Some small nuclei have, so far, wintered well out-of-doors, with very little protection. I usually have drones flying about March 20. I will stimulate a few colonies by feeding, so as to have drones a little earlier this season. I will commence to rear queens early in March. I am much encouraged in bee-keeping here, and think it can be made profitable to a moderate degree in almost any locality, I have known in the South. O. F. BLEDSOE.

Grenada, Miss., Feb. 6, 1884.

**Bees Fed on Sugar Syrup.**

The mercury got down to 24° below zero here, which is, perhaps, about 15° colder than it has ever been in this part of West Virginia. We begin to get anxious about our bees, which were left on the summer stands, one-half of them in single-walled hives, but the last few days have been warm enough for them to take outdoor exercise, and they are in fine condition. The queens have been laying, and in some colonies sealed brood is found. All the honey was taken from 2 colonies last fall, and then they were fed on syrup made of a rather cheap grade of brown sugar,

and a small quantity of dark honey mixed with the syrup. These 2 colonies showed an anxiety for a cleansing flight, and as the temperature began to get nearly right, and a little before the other colonies made any stir, they were flying from their hives in a way that indicated that they could not much longer have continued healthy. For open winters, or for climates admitting of frequent flights during the winter, the cheaper foods will answer, but where long confinements may be looked for, the safety of the bees demand well-ripened honey or granulated sugar syrup.

J. A. BUCHANAN.

Holliday's Cove, W. Va., Feb. 4, 1884.

**Irascible Cyprian Bees.**

Are they vicious in the apiary if not molested, or is it just when the hive is opened? Do they go far from the hive, when disturbed, to sting any one? How long does it take them to settle down after being disturbed? Columbus, O. P. E. BLESCH.

[It is reported by those who have kept and abandoned them that they will follow any one even in the house when on the rampage; also, that they are not soon quieted, and they do not wait for being disturbed before making the attack. We had an imported Cyprian queen, and found her bees so irascible that after a few months we superseded "her ugliness" by an amiable Italian queen. No more Cyprians for us.—ED.]

**From the Cottonwood Apiary.**

My 60 colonies are all alive and in good condition. They have been flying for the last two days. They did well last summer. I had half an acre of melilot clover which bloomed for six weeks; the bees worked on it all the time. I sow my melilot clover on the first of May. I am going to sow several varieties of seeds, this season, for my bees. I would not do without the BEE JOURNAL for twice the price of it. N. DAVIS.

Emporia, Kan., Jan. 30, 1884.

**Preparing Bees for Winter.**

I put 29 colonies in the cellar Nov. 26; left one colony on the summer stand, in a Simplicity ten-frame hive; I took out two frames, the ones containing the most pollen, leaving the bees on 8 frames. I use no packing, only an enameled sheet over them. They had a fly Jan. 13, and another to-day. I examined them to-day; they are doing well; there are very few dead bees outside, and no signs of dysentery. For the bees in the cellar, I use no packing except an enameled sheet; over some wooden mats, and some without any cover on the frames. I took 8 colonies out to-day for a flight; examined them and found them all in good condition, not a sign of dysentery; all of them were damp; the water running out of some of them; in two of them the combs



were covered with mold. I use no ventilation in my cellar, but it is frost-proof, unless on nights like Jan. 4, when it pinched the leaves off of some flowers. The thermometer then registered 32° below zero on the morning of Jan. 5. It never goes above 45°.

RICHARD GRINSELL.

Baden, Mo., Jan. 30, 1884.

### Report of a Beginner.

I bought one colony of pure Italians in the spring of 1882. It was dry during the summer, and they hardly gathered honey enough to winter on. In the spring they increased to 3, and gathered about 90 lbs. of comb honey. They are now on the summer stands, protected with chaff cushions. My father takes the BEE JOURNAL for me to read. I like it very much.

S. F. DAILY.

Mt. Hope, Kans., Feb. 5, 1884.

### Bees "On the Wing" Again.

My bees were all "on the wing" yesterday; it has been 35° below zero in this county. It made me feel rather sick to have the little fellows out in the cold. I had 6 weak colonies in the cellar. There are 14 colonies in Gallup hives with dry leaves over them, and 64 in Langstroth hives without any protection but the honey board. They are all nice and dry. I think that it is the main thing, to keep our bees dry all the time. I sometimes think that chaff hives and cushions are of no use in wintering bees, when they come through just as well without. An American hive of black bees which I sold in 1882, came here in 1877 from Iowa, and never had any protection that I know of, and this winter they are still out-of-doors, 3 feet from the ground, I should think. Now this same old colony of bees gathered 75 lbs. of surplus honey last year. My son took it off.

JAS. JARDINE.

Ashland, Neb., Jan. 14, 1884.

### Button Bush Honey.

I noticed R. S. Beckett's article in reference to button bush honey, and at the time intended to write out my experience with that kind of honey, but it slipped my mind, until I read in the BEE JOURNAL of Jan. 10, what the Rev. M. Mahin, D. D., said of it. I could no longer delay for my experience with this honey agrees with Mr. Mahin's to the letter, except the granulation. I cannot say as to that, for my honey was all in the comb. About one mile south from my place is an old sawmill pond of about 25 or 30 acres in extent, in which is a thick growth of button bush, except a narrow channel through the centre; the water is shallow, only from 2 to 4 feet deep; up to about four years ago this bush blossomed very full, and my bees had a very busy sweet time, for a week or ten days; and the way they carried in the honey, and such honey too, was enough to make any beekeeper feel good-natured. During the winter of 1879-80 this shrub seemed to have badly winter-killed, since which time it has blossomed very little, and

my bees are cut off from one of their best fields. I can endorse what the Rev. M. Mahin says of button bush honey, as with me it was very white and of good flavor.

ROBERT DOWNS.

Naugatuck, Conn., Jan. 28, 1884.

### Artificial Queens.

I have 45 colonies of bees on the summer stands, in excellent condition. I could never get along without the BEE JOURNAL. On page 67, Mr. Editor, you say "we have no use for the word artificial, in all the vocabulary of bee-keeping." Well, let us see about that: A year ago last summer a man stepped into my apiary to see me work with the bees. I was dividing for increase at the time, and he had a great many questions to ask. He asked me what I was looking for. I told him, the queen; he asked me whether I ever used any "artificial queens," made out of wax. After I recovered from laughing, I told him no, I had never used any artificial queens as yet. Well, he said he had heard of the like among some of the old-fashioned beekeepers, and the bees did well. I positively was asked that question once before. Now, Mr. Editor, I will just ask you whether you would not call such queens artificial?

S. F. MILLER.

North Manchester, Ind., Feb. 6, 1884.

[Yes; of course, such a fraud as "a wax queen" would be entitled to be called artificial. One of Webster's definitions of the word would just fit that idea—thus: "made or contrived by art, or by human skill or labor, in opposition to natural." Next time we expect to hear of bees working on artificial "wax flowers" as well as having an "artificial" wax queen! What "bosh"!—ED.]

### Experience with Cellar-Wintering.

In the fall of 1882, I put 12 colonies of Italian bees in the cellar, and packed 26 colonies on the summer stands, according to Mr. Heddon's plan. They were packed in 5 inches of sawdust, with the frames covered with burlap, and top stories filled with wheat chaff. Now, for results. The 12 colonies wintered in the cellar were taken out on April 6, strong in bees and heavy in stores, and did exceedingly well, while the 26 colonies packed in sawdust, all died with dysentery, except 5. I have, at the present time, 18 colonies packed in chaff, 5 inches on all sides, with the top stories on and filled with chaff. I also have 27 colonies stored in the cellar. They all seem to be doing well now. I use the Simplicity hive with Gallup frames. My hive is 19½ inches long by 14 wide and 12 inches deep. I use 11 Gallup frames to the hive, and a rack which holds 20 one-pound sections, with a movable side, which I consider an improvement on the tight rack, as they are more easy of manipulation. I tier them up, making 40 on a hive, which is enough at one

time. My bees are all Italians in their purity. I want no leather-colored Italians, which are nothing more or less than hybrids. If a man wants such bees, let him purchase a pure Italian queen, and he will get hybrid bees enough without buying them. I am much interested in the warm-cellar wintering of bees, as practiced by Mr. Ira Barber. I hope Mr. Barber will tell us more about it through the BEE JOURNAL. E. W. WALES, 45.

Disco, Mich., Jan. 22, 1884.

### A Square Deal.

MR. EDITOR.—In your article in the December BEE JOURNAL, on "Calling Things by their Right Names," where you criticize a writer who says his stands came out in bad shape, you seem surprised that he should convey the idea that the "stands" changed their shape, and ask, as an example, this question: "If the pieces of wood were nailed in a rectangular form, did they change of their own accord to a square shape?" Now, I would ask you: If they went into winter quarters in a rectangular form, might they not come out in the spring in a square shape, without changing in any manner? I think you will find that a square is always a rectangle, though a rectangle may not always be square.

ALSON MEAD.

Sedley, Ind.

[Mr. Mead is correct. We used the term in another sense. If we intend to "call things by the right names," let us have them right. "Hew to the line, let the chips fall where they may."—ED.]

### My Report for 1883.

On Nov. 15, 1882, I placed in the cellar 36 colonies of bees, leaving 72 on the summer stands, in good condition. I lost 1 in the cellar, and 3 on the summer stands, by starvation, and 4 by spring dwindling, leaving 100 to start with, in the spring of 1883. Though the season was only an ordinary one for honey, my bees gave me a surplus of 4,000 lbs., one-half comb and one-half extracted, and an increase of 50 colonies. On Nov. 15, 1883, I placed in the cellar 66, leaving 81 on the summer stands, in good condition; they are doing well so far, this winter, though it has been very cold.

DANIEL WHITMER.

South Bend, Ind., Jan. 26, 1884.

### Sweet Home Bee Feeder.

I send one of my bee feeders to the BEE JOURNAL museum, for the benefit of beekeepers. I have tried different kinds, but think this is the cheapest and handiest of any I ever saw. I take a common tomato can to a tinner and get a cap of about 1½ inch diameter made to fit on a flange in the center of the end, the top of the cap being made of perforated tin. When filled, invert the can on to a block of wood about 4 inches square and 1½ inches thick, having a 1½ inch hole in it for the projection with the perforated-cap to go into, and as this reaches only ¾

of the way through the block, by cutting a  $\frac{3}{8}$  inch passage-way 2 inches wide, it serves as an entrance for the bees, when that cut-away side is placed against the entrance of the hive. The fixing of this can only cost me 10 cts., and holds 3 lbs. of honey. You can feed from 1 to 3 lbs., or from 3 to 30 lbs., just as you like; all you have to do is to put more cans on the hive. I have fed 4 colonies that I secured late in the fall from a farmer that was killing them for the honey. I had the bees late in October, and put them into hives with empty combs, and placed 10 of these filled feeders over the frames of each hive, and the bees carried it all below in 5 days. If you feed at the entrance, the robbers cannot get the honey, as only the bees from the inside can get to the honey. If the bees should leave it during a cold night, the honey will not run out, for if it is held level, it will hold water. You can feed at any time of the year. In winter, feed inside of the cap; turn back the corner of the quilt, or if you use a honey board, bore a hole in it to fit the feeder.

JOHN REY.  
East Saginaw, Mich., Jan. 31, 1884.

[This feeder is practically the same as several others, particularly the Kretchmer, which has been in use for nearly 20 years.—ED.]

#### Bees did not Suffer by the Cold.

I examined all of my 75 colonies of bees in my home apiary to-day, and all answered to roll call, although the thermometer has indicated as low as 21° below zero, and the bees have had no flight for about a month, yet I never saw bees in a more healthy condition under similar circumstances. My hives are double-walled, with air space between the walls. I use a rack with  $2\frac{1}{2}$  inches of planing-mill shavings on the top of the brood-chambers. I want the absorbing material so porous or open on my hives that the bees can breathe through it, even if the entrances to the hives are entirely shut up with snow or ice.

SAMUEL D. RIEGEL.  
Adelphi, O., Jan. 23, 1884.

#### Bees Never Wintered Better.

I am satisfied that bees never wintered better than they have so far this winter. I have not lost a colony yet.

C. W. SAPPENFIELD.  
Crawfordsville, Ind., Feb. 5, 1884.

#### Young Bees Flying Now.

My bees did well last season. I commenced, in the spring, with 120 colonies; increased 40, that is, I put back all second swarms and a good many first swarms. I took 1,000 one-pound sections, and 16,000 lbs. of extracted, and there is about 4,000 lbs. on the hives to take out in the spring, that I could not take out on account of a severe spell of malarial fever last fall. We had no winter up to Jan. 1. We had it pretty cold all through January. Bees carried in pollen on Christmas day, and I had drones flying on Dec. 28. They commenced carrying

in pollen on Jan. 28, and are now working very fast on elms. I have young bees flying to-day. The honey crop has been an entire failure in Texas except in this and Brazoria counties.

J. W. ECKMAN.  
Richmond, Texas, Feb. 5, 1884.

#### Will Syrians not Sting?

In the *British Bee Journal* for Jan. 15, page 31, speaking of Syrian bees, John Hewitt, of Sheffield, says: "If you get a single sting from them just furnish an affidavit of the fact attested by two credible witnesses and sworn before a commissioner duly appointed to administer oaths, or a justice of the peace, that it was a Syrian which did it, or I shall not believe it?" Is this "talk" or truth? Can any American bee-keeper verify or disprove this Briton's statement? He professes, in a column article, that where smoke is not used to these bees, they are the most docile of all docile bees; in fact, so peaceful that you have to tread on one to make it sting; striking and jarring will not do it! It seems to me that American bee-keepers have been mistaken, even to the extent of *fancying* that Syrians stung them. Great Scott, what next?

R. J. KENDALL.  
Austin, Texas, Feb. 5, 1884.

#### Bees Under the Snow.

My bees in my new hives are doing splendidly. The ventilators are all I can ask for them; my hives are on the summer stands, with entrances filled with snow, and the bees are snug and warm. While a colony in a double-walled hive, by the side of them, has perished with the cold. I have at present 45 colonies in good condition, but they have not had a flight since the latter part of October.

D. B. BROWN.  
Des Moines, Iowa, Feb. 7, 1884.

#### Giving away Honey at the Fair.

I have just read the Michigan State Fair Premium List, and in regard to the giving away on "Children's Day" of 1,000 5-cent packages, should like to make this suggestion: That Messrs. Hutchinson and Cutting get as many of the little cans and labels as in their judgment will be called for, and let any bee-keeper send for as many as he would like to fill, with the privilege of inserting his name in a blank left in the label for that purpose, and I have no doubt there will be plenty of honey forthcoming to supply all the children.

GEO. E. HILTON.  
Fremont, Mich., Feb. 7, 1884.

#### Is Alsike Clover a Field Plant?

On page 44, Mr. Hugh Williams claims Alsike clover as a great honey plant, but he said it was no field crop. With his first sentence I agree, that it is a great honey plant, but that it is no field crop I beg to dispute, for I think that it is one of the best grasses that we can raise for hay; equal to timothy, if not better, as there is no fuzz on stem or leaves like on red clover, and rain does not hurt the hay

in curing, as it does the red and Alsike clovers; it will not freeze out, like red clover. During the past season I made about 7 tons of hay from  $3\frac{1}{2}$  acres of Alsike clover. There should be some timothy seed mixed with the clover seed to keep the clover from lodging. My clover was from  $2\frac{1}{2}$  to 3 feet high, and every bee-keeper should sow the Alsike clover, for he would get two crops—a honey crop and a hay crop, and stock like both Alsike hay and pasture better than any that I have tried yet.

E. J. C. TROXELL.  
Ft. Seneca, Ohio.

#### How to test Thermometers.

It is easy to test a thermometer. Take a vessel large enough to put the thermometer in. Surround and cover the instrument entirely with fine chopped ice, lying or standing makes no difference. Take the vessel in a warm room or near a stove, and let it stand till the ice melts. The point the thermometer shows is freezing point, or 32° below zero; or in other words, dip the thermometer in melting ice, it shows then freezing point.

CHAS. FAUST.  
Harvard, Ill., Feb. 8, 1884.

#### Local Convention Directory.

1884. Time and place of Meeting.
- Feb. 12.—Meeting at Janesville, Wis.  
Mack & Fatzinger, Com.
- Feb. 12, 13.—Convention at Arcadia, Wis.  
E. A. Morgan, Sec.
- Feb. 14, 15.—Maine State, at Lewiston, Me.  
Wm. Hoyt, Sec.
- Feb. 21-23.—E. Iowa, & W. Illinois, at Davenport, Ia.  
J. V. McCagg, Pres.
- March 5.—N. E. Michigan, at Lapeer, Mich.  
W. Z. Hutchinson, Sec., Rogersville, Mich.
- March 20.—Southern Indiana, at Madison, Ind.  
H. C. White, Sec.
- Mar. 29.—Union Association, at Dexter, Iowa.  
M. E. Darby, Sec., Dexter, Iowa.
- April 18.—Iowa Central, at Winterset, Iowa.  
J. E. Pryor, Sec.
- April 22.—Des Moines Co., at Middleton, Iowa.  
John Nau, Sec.
- April 24.—Western, at Independence, Mo.  
C. M. Crandall, Sec.
- April 24, 25.—Texas State, at McKinney.  
W. R. Howard, Sec.
- May 26.—Will County, at Monee, Ill.  
P. P. Nelson, Sec.
- Oct. 11, 12.—Northern Mich., at Alma, Mich.  
F. A. Palmer, Sec., McBride, Mich.
- Oct. 15, 16.—Northwestern, at Chicago, Ill.  
W. Z. Hutchinson, Sec.
- Dec. 10, 11.—Michigan State, at Lansing.  
H. D. Cutting, Sec., Clinton, Mich.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

At a microscopic exhibition in Boston lately the sting of a honey bee was thrown upon the screen, the point of which was so sharp as to be hardly distinguishable. At the time the finest of fine needles was shown, under the same power of the microscope, and the end of the needle measured 5 inches across.—*Exchange*.



# THE AMERICAN BEE JOURNAL

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In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

## GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, \$2.00; Monthly, \$1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar they send direct to this office, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and \$6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with \$10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

For a club of \$20, for 10 Weeklies, or an equivalent in Monthlies, we will present, besides the 15 per cent. in books, a tested Italian queen, by mail, postpaid.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

For a club of 100 Weekly (or its equivalent in Monthlies), with \$200, we will send a Magnificent Organ worth \$150. See description on page 614 of the Weekly for Nov. 28, 1883.

It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

Constitutions and By-Laws for local Associations \$2.00 per 100. The name of the Association printed in the blanks for 50 cents extra

## Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, 40 cents; per hundred, \$2.50. 500 will be sent postpaid for \$10.00; or 1000 for \$15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

A correspondent asks if any one may select a Binder for the BEE JOURNAL, among the books given as Premiums for getting subscribers; we reply, yes, any book or binder we keep for sale may be selected by those who get up clubs.

## The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)..... \$1 00  
" 100 colonies (220 pages)..... 1 50  
" 200 colonies (420 pages)..... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

We now club the *British Bee Journal* and our Monthly for \$2.50.

Our friends will find this the season for securing subscriptions. We offer the premiums and they can easily secure them.

Do not let your numbers of the BEE JOURNAL for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference

As the reading season has come with the long winter evenings, it is just the time to read the various books on Bee-keeping. When renewing your subscriptions will be a good time to get a supply of such literature. See our club rate on Books with the BEE JOURNAL, on the first page of this paper.

**Honey and Beeswax Market.**

OFFICE OF AMERICAN BEE JOURNAL,  
Monday, 10 a. m., Feb. 11, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

**CINCINNATI.**

**HONEY**—There is no change to note in the honey market. No change in the price of extracted honey, but there is an improvement in the demand. Comb honey is in large supply, and the best in 1 lb. sections brings no more than 16c. a lb. from store. Extracted, 7@10c.  
**BEESWAX**—Fair demand, and arrivals are fair. It brings 28@32c. on arrival.

CHAS. F. MUTH.

**NEW YORK.**

**HONEY**—White clover and basswood in 1 and 2 lb. sections, 15@21c. Dark and second quality, 15c.; extracted white clover in kegs and barrels, 9@10c.  
**BEESWAX**—Prime yellow, 34@35c.

H. K. & F. B. THURBER & CO.

**CHICAGO.**

**HONEY**—Goes off slowly, and prices are lower on sections that are imperfectly filled. The demand seems to be chiefly for lots that are fancy in appearance, and in every way perfect sales are made of 1 lb. sections at 15@20c.; 1 1/2 lb. sections, 14@18c.; dark and mixed in color, very slow, at about 12@13c. Extracted honey steady, but limited demand; prices range from 7@10c. per lb.  
**BEESWAX**—Scarce, at 28@35c., according to color and cleanliness.

R. A. BURNETT, 161 South Water St.

**KANSAS CITY, MO.**

**HONEY**—No material change to note. Demand for 1 and 2 lb. sections of white honey keeps up well for this time of the year, and prices fairly maintained at 17@18c. Dark comb honey very slow and not wanted. I am very low on nice 2 lb. sections, and could make pretty quick returns on a few choice lots. Demand for extracted fair at 8@9c. for dark fall; receipts light. I attribute the continued good demand for comb honey in this market to the careful overhauling and handling that I give it, thereby getting it to the country merchants in good condition, which encourages them to buy.  
JEROME TWICHELL, 514 Walnut Street.

**SAN FRANCISCO.**

**HONEY**—Strictly choice is inquired for in a small way, and for such the market is moderately firm. For common qualities there is little or no demand, and prices favor buyers. White to extra white comb, 15@18c.; dark to good, 9@11c.; extracted, choice to extra white, 6@7 1/2c.; dark and candied, 5@6c.

**BEESWAX**—Wholesale, 27 1/4@30c.

STEARNS & SMITH, 423 Front Street.

**ST. LOUIS.**

**HONEY**—Selling quietly at steady prices; comb at 14@18c., and strained and extracted at 7@8c. Top rates for fancy small packages.  
**BEESWAX**—Firm at 32@33c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

**CLEVELAND.**

**HONEY**—The honey market has been dull with us during the month of January, but the past week it has been better, so that stocks are again reduced. Choice white 1 lb. in good order, sold at 18 cts.; the same quality when broken sold at 16c.; 2 lb. best white, 16@17c.; second quality, no sale. Extracted as usual, not at all wanted in our market.  
**BEESWAX**—In great demand, but no supply; nominally 30c. per lb.

A. C. KENDEL, 115 Ontario Street.

**BOSTON.**

**HONEY**—Demand light. 1 lb. sections comb honey, 14@20c.; 2 lb. 16@18c. Extracted, 9@11c.  
**BEESWAX**—35c.

BLAKE & RIPLEY, 57 Chatham Street.

**Bee Pasturage a Necessity.**—We have issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for ten cents.

We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

The sixth annual convention of Texas bee-keepers will be held at the "Bee Garden" of Judge W. H. Andrews at McKinney, Collin Co., Tex., on April 24 and 25, 1884. A larger number of leading bee masters than ever assembled on a similar occasion in the South, is anticipated.

WM. R. HOWARD, Sec.  
Kingston, Tex., Jan. 16, 1884.

The Western Bee-keepers' Association will meet at Independence, Mo., Thursday, April 24, 1884.

C. M. CRANDALL, Sec.  
Independence, Mo.

We intend to organize a bee-keepers' association for Southern Indiana on March 20, 1884, to meet at the Merchants and Manufacturers' Club Rooms, Madison, Ind., at 9:30 a. m. Kentucky bee-keepers are invited to participate.

H. C. WHITE.

**Emerson Binders**—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

**Preparation of Honey for the Market**, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

J. W. ECKMAN,

DEALER IN

**Pure Italian Bees and Queens**

For further information, send for Circular.

7A1y RICHMOND, Fort Bend Co. TEXAS.

**Given's Foundation Press.**

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,

1AB1f HOOPESTON, ILL.

65 ENGRAVINGS.

**THE HORSE,**  
BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,

925 West Madison Street, CHICAGO, ILL.

THIS PAPER may be found on file at Geo. F. Howell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in NEW YORK.

**HELLO! HELLO!**

We are now ready to Book Orders for

**Bee-Keepers' Supplies.**

**SECTIONS** A Specialty.

Everything fully up with the times, and  
**At Lowest Figures!**

Send stamp for 32-page Catalogue and Samples.

**APIARIAN SUPPLY CO.,**  
7A6m WILTON JUNCTION, IOWA.

**REST** not life is sweeping by, go and dare before you die, something mighty and sublime, leave behind to conquer time." \$68 a week in your own town. \$5 out—free. No risk. Everything new. Capital not required. We will furnish you everything. Many are making fortunes. Ladies make as much as men, and boys and girls make great pay. Reader, if you want business at which you can make great pay all the time, write for particulars to H. HALLETT & CO Portland, Maine. 8A1y

**Dadant's Foundation Factory, wholesale**  
See Advertisement in another column.

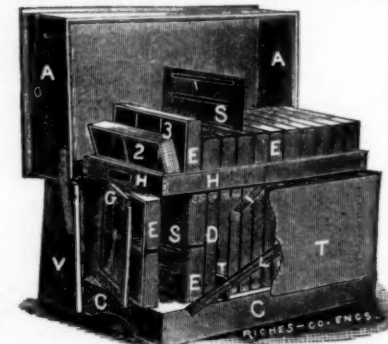
**Palace Bee Hive**

And Bee-keepers' Supplies, One-Piece Dovetailed Sections, Smokers, etc. Send for Price List.

7A13t H. C. WHITE, MADISON, IND.

**AGENTS** wanted for The Lives of all the Presidents of the U. S. The largest, handsomest best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK CO., Portland, Maine. 4A1y

1876. CROWN 1882.



The best arranged HIVE for all purposes in existence. Took first premium at St. Louis Fair in 1882 and 1883 over all competitors. Descriptive Circular sent free to all on application.

Address, **ELVIN ARMSTRONG,**  
Prop'r. of the Crown Bee Hive Factory and Apiary,  
JERSEYVILLE, ILL.

**GOLD** for the working class. Send 10 cents for postage, and we will mail you free, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business.

Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to \$5 every evening. That all who want work may test the business, we make this unparalleled offer: to all who are not well satisfied, we will send \$1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Portland, Maine. 4A1y

**Pure Italian Bees and Queens!**

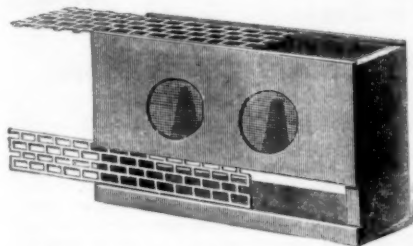
Send for Price List to

A. B. MILLER, Wakarusa, Elkhart Co., Ind. 7D6t



## Swarming Controlled!

A Drone and Queen Trap, and Drone-Excluder combined.



This Trap is the only perfect-working Drone-Excluder yet devised. A piece of perforated zinc placed at the entrance of a hive does not exclude drones. It operates exactly the reverse, as, by such an arrangement, the Drones cannot escape, and the entrance is clogged by them during the busy part of the day. This is not the case with the Drone Trap, as it is so constructed that the drones enter a chamber out of the way, and may be preserved or destroyed as desired. No Queen can leave the hive at swarming time; and the new colony can be compelled to cluster where desired, so that the bee-master will not have to climb into a tall tree for his bees when the thermometer is from 90 to 100 degrees in the shade, as is often the case during the swarming season.

Sent by mail, postage paid, on receipt of \$1.10. Liberal discount by the quantity. Our 22d Annual Illustrated Circular and Price List of Queens and Supplies, gives a full description of the Drone Trap, and directions for using them.

HENRY ALLEY,

7A2t Essex Co. WENHAM, MASS.

Dadant's Foundation Factory, wholesale  
See Advertisement in another column.

## Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.  
32ABft J. VANDERVORT, Laceyville, Pa.

## A PRIZE.

Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At office address, TRUE & Co., Augusta, Maine. 4A1y

## For Bees, Queens,

Honey, Foundation, Hives, Sections, and all Apian Implements, send for Circular to

FLANAGAN & ILLINSKI,

1AB1y Lock box 965. Belleville, St. Clair Co., Ills.

Dadant's Foundation Factory, wholesale  
See Advertisement in another column.

## WISE

people are always on the lookout for chances to increase their earnings, and in time become wealthy; those who do improve their opportunities remain in poverty. We offer a great chance to make money. We want many men, women, boys and girls to work for us right in their own localities. Any one can do the work properly from the first start. The business will pay more than ten times ordinary wages. Expensive outfit furnished free. No one who engages fails to make money rapidly. You can devote your whole time to the work, or only your spare moments. Full information and all that is needed, sent free. Address STINSON & Co., Portland, Maine. 8A1y

Dadant's Foundation Factory, wholesale  
See Advertisement in another column.

## \$5,000 REWARD!

We want an agent in every town. Something new and profitable. Men, women, boys, girls send 2c. stamp for outfit. We offer \$5000 worth of premiums to our agents. Address,

THE RURAL HOME, Philadelphia, Pa.

5A4t

## \$66

a week at home. \$5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine. 4A1y



## STORY & CAMP,

Manufacturers and Wholesale Dealers in

## PIANOS AND ORGANS

Decker Bros.,  
Haines Bros.,  
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The largest exclusively  
Piano and Organ house  
on the Continent.

Territory given. Agents Wanted. Protection guaranteed.

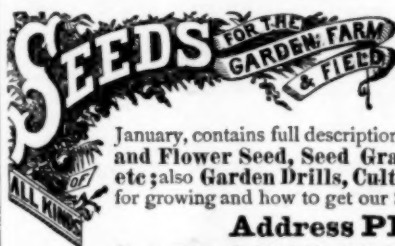
Catalogues free to any address.

Write for our prices before buying elsewhere.

## STORY & CAMP,

188 & 190 State Street,  
CHICAGO.

203 N. Fifth Street,  
ST. LOUIS.



ESTABLISHED 1845.

## Our Annual Catalogue,

mailed free on application, published first of every January, contains full description and prices of Reliable Vegetable, Tree, Field and Flower Seed, Seed Grain, Seed Corn, Seed Potatoes, Onion Sets, etc.; also Garden Drills, Cultivators, Fertilizers, etc., with full information for growing and how to get our Seeds.

## Address PLANT SEED COMPANY,

Nos. 812 & 814 N. 4th St.,

ST. LOUIS, MO.

## HOPE FOR THE DEAF.

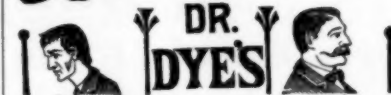
Peck's Patent Tubular Cushioned Ear Drums cure Deafness in all stages. Recommended by scientific men of Europe and America. Write for illustrated descriptive book and testimonials from doctors, judges, ministers and prominent men and women who have been cured, and who take pleasure in recommending them. They are unseen while in use, comfortable to wear, and make a permanent cure. Address:—WEST & CO., 7 Murray St., New-York, Agents for South and West.

## Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,  
Langstroth Bee Hives, Honey Sections, etc.  
Apply to C. F. MUTH,

976 and 978 Central Ave., CINCINNATI, O.  
Send 10c. for Practical Hints to Bee-Keepers.

## 30 DAYS' TRIAL



DR. DYE'S  
ELECTRO-VOLTAIC BELT and other ELECTRIC APPLIANCES are sent on 30 Days' Trial TO MEN ONLY, YOUNG OR OF OLD, who are suffering from NERVOUS DEBILITY, LOST VITALITY, WASTING WEAKNESSES, and all those diseases of a PERSONAL NATURE, resulting from ABUSES and OTHER CAUSES. Speedy relief and complete restoration to HEALTH, VIGOR and MANHOOD GUARANTEED. Send at once for Illustrated Pamphlet free. Address  
VOLTAIC BELT CO., Marshall, Mich.

Dadant's Foundation Factory, wholesale  
See Advertisement in another column.

BEE-KEEPER WANTED.—ADDRESS, stating terms. C. WEEKS, Clifton, Tenn. 5A4t

## A NEW HIVE.

Arranged for continuous combs and continuous passage-ways. Will be found a pleasure to work with, and can be easily and rapidly managed. For comb honey it is without a rival, and as an invention, is second only to that of movable brood frames.

## Guaranteed to Give Satisfaction.

SEND FOR PRICE LIST AND CIRCULAR.

Address, DR. G. L. TINKER,  
44Atf NEW PHILADELPHIA, O.

## \$72

A week made at home by the industrious. Best business now before the public. Capital not needed. We will start you. Men, women, boys and girls wanted everywhere to work for us. Now is the time. You can work in spare time, or give your whole time to the business. No other business will pay you nearly as well. No one can fail to make enormous pay, by engaging at once. Costly outfit and terms free. Money made fast, easily and honorably. Address TRUE & Co., Augusta, Maine. 8A1y

## FLAT-BOTTOM COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,  
Sole Manufacturers,  
Sprout Brook, Mont. Co., N. Y.

1868. 1884.  
**HEDDON'S**  
COLUMN.



My New Langstroth Hive.

Thanking you for past years' patronage, I solicit what I may justly merit for the coming season. I am led to believe that the goods I offer, and my ways of doing business, give at least an average satisfaction, from the fact that my trade has more than doubled every year since I have dealt in supplies, and that nearly all of my former customers are customers still. True, we have had complaints, but we have more than 50 testimonials of best satisfaction, to every one such complaint.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

Given Comb Foundation, after having been thoroughly tested by many of our most experienced, most successful and most extensive bee-keepers, now stands, at least, second to none. I have on hand a large and choice stock of pure, domestic wax, together with improved facilities for making an article of that Foundation excelled by none.

Up to this date, Jan. 1, I have not been able to make any contract for any first-class Sections, and I neither use or sell any others. If I offer you any for 1884, you will see notice here. I have about 10,000 5x6x2 to spare now.

**BEEES.**

We now have in winter quarters, in first-class condition, 350 colonies of bees, of our new strain, and of pure Italian blood. As most of you are aware, for six years past I have taken pains to breed my stock for markings of character, or qualities, rather than color, using as a base, the leather colored Italian and brown German bees.

On reading my Circular, you will find some testimonials from practical bee-keepers (a few saved from many received), that will give you an idea of how well I have succeeded. Our hives and combs are in good condition, and our bees have always been free from foul brood. I shall endeavor to send out a first-class line of Full Colonies, Queens, Nuclei and Bees by the pound. Parties wishing to start an apiary, or purchase on a large scale, as well as those who wish the choicest of my stock to breed from, may do well to correspond with me.

Among the goods we have to offer, are Standard Langstroth and American Frames in the flat, a complete line of Bingham Smokers and Honey Knives, Excelsior Honey Extractors, Wax Extractors, Plated Wire, for wiring frames, our new style Nucleus Hives, both made up and in the flat, Bee Vests, Sample Shipping Crates, Comb Foundation Fasteners, Surplus Honey Registers, our three styles of Bee Feeders (for which I have numerous testimonials), and various parts of our Hive.

**STUDENTS OF BEE-CULTURE.**

Those who may wish to spend six months in the theory and practice of Apiculture, may do themselves a service by writing for terms for 1884.

I send out CIRCULARS to those who solicit them, only, and when ordering, will you please be sure to state whether or not you have my Circular of 1883. I believe we have no patent on anything we make, use, or sell, except Bingham smoker and knife.

As in the past, we shall do our best to satisfy the reasonable, and deal out exact justice to all. Address all orders and communications to

**JAMES HEDDON,**  
DOWAGIAC, Cass County, MICH.

**BEEESWAX.**

I pay \$2c. per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

**ALFRED H. NEWMAN,**  
WHOLESALE AND RETAIL DEALER IN  
**BEE-KEEPERS' SUPPLIES,**

INCLUDING SECTIONS FOR COMB HONEY, SMOKERS, VEILS, GLOVES,

Honey and Wax Extractors, Comb Foundation, Kegs and Pails for Honey, Seeds for Honey Plants, etc.,

923 WEST MADISON STREET,

**CHICAGO, ILLINOIS.**

Illustrated Catalogue sent free upon application.

**COMB FOUNDATION.**

On account of the prevailing scarcity of beeswax, the price of comb foundation is now advanced 3 cents per pound above the price quoted in my Catalogue for 1884.

**ALFRED H. NEWMAN.**

923 West Madison Street. CHICAGO, ILL.

**BEEES and HONEY,**

OR THE

Management of an Apiary for Pleasure and Profit; by

**THOMAS C. NEWMAN.**

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most money in its best and most attractive condition.

**Appreciative Notices.**

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

Valuable for all who are interested in the care and management of bees.—Dem., Allegan, Mich.

Engravings are fine. Gotten up in the best style and is cheap at the price.—Farmer, Cleveland, O.

Carefully prepared for beginners.—Farmers' Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

New and valuable, and embellished with 109 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

A manual, containing all the newest discoveries in the management of these little workers.—Plain Dealer, St. Lawrence, N. Y.

Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

It comprises all that is necessary for successful bee-culture, save experience and good judgment.—Daily Republican, Utica, N. Y.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

Embraces every subject of interest in the apiary, giving very thorough details of the management and manipulations necessary to make bee-keeping a success.—Farm, Longmont, Colo.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.


Describes all the newest discoveries in the art, by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive shape.—Signal, Napoleon, O.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive shape, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

PRICE—Bound in cloth, 75 cents; in paper covers, 50 cents, postpaid.

**THOMAS C. NEWMAN,**

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 A Liberal Discount to Dealers by the Dozen or Hundred.